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| 10/615,547 | 07/08/2003 | Blaine R. Southam | 200208274-1 | 9040 |

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| EXAMINER | |
|---|---|
| JEAN GILLES, JUDE | |
| **ART UNIT** | **PAPER NUMBER** |
| 2143 | |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/615,547 | SOUTHAM ET AL. | |
| | Examiner | Art Unit | |
| | Jude J. Jean-Gilles | 2143 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *27 March 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-38* is/are pending in the application.

4a) Of the above claim(s) *25-30* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24 and 31-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

This Action is in regards to the Reply received on 03/27/2007.

### *Response to Amendment*

1. This action is responsive to the application filed on 07/08/2003, and a Reply dated 03/27/2007. Claims 1-24, and 31-38 are pending in the present application. Claims 1, 2,, 8, 9, 14-17, 20, 21, 24, have been amended. Claims 25-30 are cancelled Claims 31-38 are newly added. Claims 1-24, and 31-38 represent a method and apparatus for "testing network services."

### *Response to Arguments*

2. Applicant's arguments with respect to independent claims 1, 9, 17, 21, and 33 are not deemed fully persuasive. Applicant's arguments are deemed moot in view of the following new ground of rejection as explained here below, necessitated by Applicant substantial amendment (i.e., a method for testing not simply a network service, but specifically a web service under test and directed to an actual network service) which significantly affected the scope thereof.

The dependent claims stand rejected as articulated in the First Office Action and all objections not addressed in Applicant's response are herein reiterated.

In response to Applicant's arguments, 37 CFR § 1.11(c) requires applicant to "clearly point out the patentable novelty which he or she thinks the claims present in view of the

state of the art disclosed by the references cited or the objections made. He or she must show the amendments avoid such references or objections."

Applicant's Request for Reconsideration filed on November 16th, 2004 has been carefully considered but is not deemed fully persuasive. However, because there exists the likelihood of future presentation of this argument, the Examiner thinks that it is prudent to address Applicants' main points of contention.

Applicants contend that both Malik and Lozinski patent references at least fail to teach or suggest intercepting a message "sent by a web service under test". Instead, both references simply pertain to telephone networks and calls made thereon. New patent of Kheirolomoom is usedin combination with Malik and Lozinski to teach this limitation in the art.

Examiner notes that no new matter has been added and that the new claims are supported by the application as filed. However, applicant has failed in presenting claims and drawings that delineate the contours of this invention as compared to the cited prior art. Applicant has failed to clearly point out patentable novelty in view of the state of the art disclosed by the references cited that would overcome the 103(a) rejections applied against the claims, the rejection is therefore sustained.

***Double Patenting***

3. Claims 1, 9, 17, 21, 25, and 28 have been rejected under the doctrine of obviousness-type double patenting as being unpatentable in view of claims 1, 9, 16, and

22 of U.S. Patent No. 6,920,410 ("the '410 patent") and claims 1, 9, 17, 21, 25, and 28 have been rejected under the doctrine of obviousness-type double patenting as being unpatentable in view of claims 1, 15, and 24 of U.S. Application No. 10/617,002 ("the '002 application").

Regarding the '410 patent, Applicant has submitted a timely filed terminal disclaimer that disclaims a portion of term for a patent issuing from the present application that will extend beyond the term of the '410 patent. Applicant's request is granted. The rejection relative to that patent is withdrawn.

Regarding the '002 application, the rejection is also withdrawn relying upon the argument that "the '002 application does specifically teach the steps of "intercepting a message "sent by a web service under test" or "determining whether the message should be redirected to a mock network service that emulates operation of' an actual network service.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Malik et al (hereinafter Malik) U.S. Patent No. 6,160,794 in view of Lozinski et al

(hereinafter Lozinski) U.S. Patent No. US 6055306, further in view of Kheirolomoom et al (hereinafter Kheirolomoom) U.S. Pub.t No. US 2003/0004746 A1

**Regarding claim 1:** Malik discloses the invention substantially as claimed. Malik teaches an method for testing a network service (see abstract; also see fig. 1), the method comprising:

intercepting a message sent by a web service under test and directed to an actual network service (column 10, lines 57-67); determining whether the message should be redirected to a mock network service that emulates operation of the actual network service (column 10, lines 57-67; column 11, lines 1-18); however Malik does not disclose the details of "redirecting the message to the mock network service if it is determined that the message should be so redirected".

In the same field of endeavor, Lozinski discloses "...*Call Redirect via the IP (14) without charge. This application can mimic services which may be available in the switch and need not be charged, but without ACS suppression support if the IP (14) were to implement it, the redirection would be charge to the caller* ..." [see Lozinski; column 6, lines 8-13, and column 10, lines 1-5].

Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time the invention was made to have incorporated Lozinski's teachings of redirecting the message to the mock network service if it is determined that the message should be so redirected with the teachings of Malik, for the purpose of improving the ability of a network "...*to provide* method of suppressing call answer

supervision by a peripheral device in a network, whereby a billing record for the call is not created" as stated by Losinski in lines 30-34 of column 2.

In the reply dated 03/27/2007, applicants have amended the independent claims to include the specifically the testing of a web service using and actual web service and a mock web service. Kheirolomoom teaches a system that uses "test databases and Web Services can be used instead of the actual runtime versions". It would have been obvious for an ordinary skill in the art, when the invention was made to have incorporated this concept with the teachings of Malik and Lozinski in order to create a system that abstracts technical implementation details to create an environment where business experts are empowered to create, test, deliver and manage their own online solutions (see Kheirolomoom, summary of the invention, par. 0005). By this rationale, **claim 1** is rejected.

**Regarding claim 2:** the combination Malik- Losinski-Kheirolomoom discloses the method of claim 1, wherein intercepting a message comprises intercepting a request that is related to a request sent to the web service under test from a mock client using a web protocol [see Lozinski; column 6, lines 8-13, and column 10, lines 1-5].

**Regarding claim 3:** the combination Malik- Losinski-Kheirolomoom the method of claim 1, wherein intercepting a message comprises intercepting the message using a network proxy. The Examiner takes Official Notice that using a proxy network for redirecting network services is well-known in the art. Accordingly, it would have been obvious for an ordinary skill in the art to use a network proxy in combination with the teachings of Losinski in column 6, lines 8-13, and column 10, lines 1-5, and the

teachings of Malik in column 10, lines 57-67; column 11, lines 1-18. By this rationale, claim 3 is rejected.

**Regarding claim 4:** the combination Malik- Losinski-Kheirolomoom discloses the method of claim 1, wherein intercepting a message comprises intercepting the message using a data handler [see Malik; column 5, lines 45-60].

**Regarding claim 5:** the combination Malik- Losinski-Kheirolomoom discloses the method of claim 1, wherein determining whether the message should be redirected to a mock network service comprises identifying a network address to which the message is directed [see Lozinski; column 6, lines 8-13, and column 10, lines 1-5].

**Regarding claim 6:** the combination Malik- Losinski-Kheirolomoom discloses the method of claim 5, wherein determining whether the message should be redirected to a mock network service further comprises searching for the network address in a redirection database [see Lozinski; column 6, lines 8-13, and column 10, lines 1-5; column 4, lines 31-40].

**Regarding claim 7:** the combination Malik- Losinski-Kheirolomoom discloses the method of claim 6, wherein redirecting the message to the mock network service comprises redirecting the message to a network address associated with the network address searched for in the redirection database [see Lozinski; column 6, lines 8-13, and column 10, lines 1-5; column 4, lines 31-40].

**Regarding claim 8:** the combination Malik- Losinski-Kheirolomoom discloses the method of claim 1, further comprising receiving a response from the mock network

service and transmitting the response to the webservice under test [see Lozinski; column 6, lines 8-13, and column 10, lines 1-5; see Malik; column 10, lines 57-67; column 11, lines 1-18].

**Regarding claim 9:** the combination Malik- Losinski-Kheirolomoom discloses a system for testing a network service (see Malik; abstract; also see fig. 1), the system comprising:

means for intercepting a message transmitted via a web protocol by a service under test and intended for receipt by an external network service; means for determining whether the message should be redirected to a mock network service that emulates operation of the external network service (see Malik; column 10, lines 57-67; column 11, lines 1-18); and means for redirecting the message to the mock network service [see Lozinski; column 6, lines 8-13, and column 10, lines 1-5; see Kheirolomoom, par. 0417].

**Regarding claim 10:** the combination Malik- Losinski-Kheirolomoom discloses the system of claim 9, wherein the means for intercepting a message comprise a network proxy. The Examiner takes Official Notice that using a proxy network for redirecting network services is well-known in the art. Accordingly, it would have been obvious for an ordinary skill in the art to use a network proxy in combination with the teachings of Losinski in column 6, lines 8-13, and column 10, lines 1-5, and the teachings of Malik in column 10, lines 57-67; column 11, lines 1-18. By this rationale, claim 10 is rejected.

**Regarding claim 11:** the combination Malik- Losinski-Kheirolomoom discloses the system of claim 9, wherein the means for intercepting a message comprise a data

handler [see Malik; column 5, lines 45-60].

**Regarding claim 12:** the combination Malik- Losinski-Kheirolomoom discloses the system of claim 9, wherein the means for determining whether the message should be redirected to a mock network service comprise a redirection database [see Lozinski; column 6, lines 8-13, and column 10, lines 1-5; column 4, lines 31-40].

**Regarding claim 13:** the combination Malik- Losinski-Kheirolomoom discloses the system of claim 12, wherein the redirection database comprises a table that forms part of a redirection service [see Lozinski; column 6, lines 8-13, and column 10, lines 1-5; column 4, lines 31-40].

**Regarding claim 14:** the combination Malik- Losinski-Kheirolomoom discloses the system of claim 13, wherein the table associates network addresses of external network services to network addresses of mock network services [see Lozinski; column 6, lines 8-13, and column 10, lines 1-5].

**Regarding claim 15:** the combination Malik- Losinski-Kheirolomoom discloses the system of claim 14, wherein the table associates universal resource locators (URLs) of external network services to universal resource locators (URLs) of mock network services. The Examiner takes Official Notice that using URLs for redirecting network services is well-known in the art. Accordingly, it would have been obvious for an

ordinary skill in the art to use URLs in combination with the teachings of Losinski in column 6, lines 8-13, and column 10, lines 1-5, and the teachings of Malik in column 10, lines 57-67; column 11, lines 1-18. By this rationale, claim 15 is rejected.

**Regarding claim 16:** the combination Malik- Losinski-Kheirolomoom discloses the system of claim 9, further comprising means for receiving a response from the mock network service and means for transmitting the response to the web service under test. [see Lozinski; column 6, lines 8-13, and column 10, lines 1-5; see Malik; column 10, lines 57-67; column 11, lines 1-18].

**Regarding claim 17:** the combination Malik- Losinski-Kheirolomoom discloses a system stored on a computer-readable medium, the system comprising:
logic configured to intercept messages transmitted by a web service under tes via a web protocol and intended for external web service; logic configured to determine whether the messages should be redirected to mock network services that emulate operation of the external web services (see Malik; column 10, lines 57-67; column 11, lines 1-18); and logic configured to redirect the messages to the mock network services [see Lozinski; column 6, lines 8-13, and column 10, lines 1-5; ; see Kheirolomoom, par. 0417].

**Regarding claim 18:** the combination Malik- Losinski-Kheirolomoom discloses the system of claim 17, wherein the logic configured to intercept comprises a network proxy.

The Examiner takes Official Notice that using a proxy network for redirecting network services is well-known in the art. Accordingly, it would have been obvious for an ordinary skill in the art to use a network proxy in combination with the teachings of Losinski in column 6, lines 8-13, and column 10, lines 1-5, and the teachings of Malik in column 10, lines 57-67; column 11, lines 1-18. By this rationale, claim 18 is rejected.

**Regarding claim 19:** the combination Malik- Losinski-Kheirolomoom discloses the system of claim 17, wherein the logic configured to intercept comprises a data handler [see Malik; column 5, lines 45-60].

**Regarding claim 20:** the combination Malik- Losinski-Kheirolomoom discloses the system of claim 17, wherein the logic configured to determine comprises a redirection database that associates network addresses of external network services to network addresses of mock web services [see Lozinski; column 6, lines 8-13, and column 10, lines 1-5; column 4, lines 31-40].

**Regarding claim 21:** the combination Malik- Losinski-Kheirolomoom discloses a redirector for use in testing a network service, the redirector being configured to: receive a message transmitted by a web service under test using a web protocol and intended for an external web service; determine whether the message should be redirected to a mock network service that emulates operation of the external network service (see Malik; column 10, lines 57-67; column 11, lines 1-18); and redirect the message to the mock network service if the message is determined to be so redirected [see Lozinski;

column 6, lines 8-13, and column 10, lines 1-5; ; see Kheirolomoom, par. 0417].

**Regarding claim 22:** the combination Malik- Losinski-Kheirolomoom discloses the redirector of claim 21, wherein the redirector comprises a network proxy. The Examiner takes Official Notice that using a proxy network for redirecting network services is well-known in the art. Accordingly, it would have been obvious for an ordinary skill in the art to use a network proxy in combination with the teachings of Losinski in column 6, lines 8-13, and column 10, lines 1-5, and the teachings of Malik in column 10, lines 57-67; column 11, lines 1-18. By this rationale, claim 22 is rejected.

**Regarding claim 23:** the combination Malik- Losinski-Kheirolomoom discloses the redirector of claim 21, wherein the redirector comprises a data handler [see Malik; column 5, lines 45-60].

**Regarding claim 24:** the combination Malik- Losinski-Kheirolomoom discloses the redirector of claim 21, wherein the redirector comprises a redirection database that associates network addresses of external network services to network addresses of mock network services [see Lozinski; column 6, lines 8-13, and column 10, lines 1-5; column 4, lines 31-40].

**Regarding claims 31-38** the combination Malik- Losinski-Kheirolomoom teaches:

31. (New) The method of claim 1, wherein intercepting a message comprises intercepting a message directed via a hypertext transfer protocol to the actual web service (see Kheirolomoom, par. 0417).

32. (New) The method of claim 1, wherein intercepting a message comprises intercepting a hypertext markup language (HTML) message or an extensible markup

language (XML) message (see Kheirolomoom, par. 0064, 0068).

33. (New) A method for testing a web service, the method comprising:

a mock client that emulates an actual client sending a request to a web site associated with a web service under test; the web service under test receiving the request and directing a related request to an actual web service; and a redirection service intercepting the related request such that the related request does not reach the web site associated with the actual web service, the redirection service rerouting the related request to a mock web service that emulates operation of the actual web service (see Malik, column 10, lines 57-67; column 11, lines 1-18; see Lozinski; column 6, lines 8-13, and column 10, lines 1-5; see Kheirolomoom, par. 0417).

34. (New) The method of claim 33, further comprising the mock web service receiving the related request and returning a response to the web service under test (see Kheirolomoom, par. 0136, 0140).

35. (New) The method of claim 34, further comprising the web service under test receiving the response and returning a related response to the mock client (see Kheirolomoom, par. 0136, 0140, 0417).

36. (New) The method of claim 33, wherein directing a related request to a web site associated with an actual web service comprises sending a hypertext markup language (HTML) message or an extensible markup language (XML) message via hypertext transfer protocol (HTTP) (see Kheirolomoom, par. 0064, 0068).

37. (New) The method of claim 33, wherein rerouting the related request comprises the redirection service searching a database for a web address to which the related request

is directed, identifying a network address associated with the mock web service, and sending the related request to the network address (see Kheirolomoom, par. 0136, 0140, 0417).

38. (New) The method of claim 33, wherein the mock client, web service under test, and the mock web service execute on top of a virtual machine (see Kheirolomoom, par. 0136, 0140, 0417).

***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from examiner should be directed to Jude Jean-Gilles whose telephone number is (571) 272-3914. The examiner can normally be reached on Monday-Thursday and every other Friday from 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley, can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-9000.

Jude Jean-Gilles

Patent Examiner

Art Unit 2143

JJG

June 06, 2007

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